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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,764

09/10/2003

Masayoshi Imoto

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EXAMINER

LAM, HUNG H

ART UNIT

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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/658,764	Applicant(s) IMOTO, MASAYOSHI	
	Examiner HUNG H. LAM	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,9,11,14,15,18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4,7,8,10,12,13,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 5-6, 9, 11, 14-15, 18-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 05/29/08.

2. The traversal is on the ground(s) that “the imaging device shown in Fig. 8 is only a modification of the imaging device 3 shown in Fig. 1, and NOT a modification of the whole system. Thus, the Election of Species Requirement is improper and that It is also respectfully submitted that the subject matter of all species is sufficiently related that a thorough search for the subject matter of any one Group of species would encompass a search for the subject matter of the remaining species. Thus, it is respectfully submitted that the search and examination of the entire application could be made without serious burden”. This is not found persuasive. The additional arrangement of concave optical element 16 of Fig. 8, triangle optical element 56 of Fig. 9 and different shape of optical element 16, 29 in combination with different imaging device's structures cause Figs. 8 and 9-10 to become patentably distinct species, and thereby providing undue burden of additional search and consideration to the Examiner. Further more, the applicant is required under 35 U.S.C 121 to elect a single disclosed species for prosecution on the merit.

The requirement is still deemed proper and is therefore made FINAL.

The Applicant is reminded that upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. Figures 11-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4, 7-8, 10, 12-13 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakata (US-6,166,764).

With regarding **claim 1**, Sakata discloses an imaging device comprising:

an image pickup element configured to simultaneously pick up images in plural visual field directions (see Figs. 5-6; 13);

an image pickup lens arranged on a front face of the image pickup element (Figs. 5-6; lens 3); and

a first optical element arranged on a front face of the image pickup lens (3) and having a concave lens property (Figs. 5-6; see concave 2c and 1b), wherein the first optical element guides lights from wide angle ranges in partial visual field directions among the plural visual field directions onto the image pickup element via the image pickup lens (Figs. 5-6; Col. 8, Ln. 43-Col. 9, Ln. 53; the concave lens 2c inherently guides lights from a plurality of field of view into image sensor 13).

With regarding **claim 2**, Sakata discloses the imaging device as claimed in claim 1 further comprising a second optical element arranged on the front face of the image pickup lens (3) and having no concave lens property (Figs. 5-6; see surfaces 2b-2a), wherein the second optical element guides lights from non-wide angle ranges in the

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remaining visual field directions among the plural visual field directions onto the image pickup element via the image pickup lens (Col. 8, Ln. 42-50; Col. 9, Ln. 1-20; each of the surface lens 2a or 2b guides lights from either left or right direction).

With regarding **claim 4**, Sakata discloses the imaging device as claimed in claim 2, wherein the second optical element comprises a pair of left and right prisms each having a triangle pole shape (Figs. 5-6; see the shape that is formed by surface 2a and 2b), and wherein each of the left and right prisms guides the incident light from the respective visual field directions incident from a side face arranged on the visual field direction side onto the image pickup element (13) via the image pickup lens (3) after reflecting the incident light twice on inner prism faces thereof (see Figs. 5-6; Col. 8, Ln. 55-Col. 9, Ln. 19).

With regarding **claim 7**, Sakata discloses the imaging device as claimed in claim 1, further comprising an assembly member configured to assemble the first optical element with the image pickup lens (Fig. 5; see imaging device casing 4).

With regarding **claim 8**, Sakata discloses the imaging device as claimed in claim 1 further comprising a case having light shielding property (see section 4 and 102; Col. 13, Ln. 62-67) and having a transparent portion configured to take in the lights from the plural visual field directions (see entrance windows 4b-4a; Col. 5, Ln. 52-Col. 6, Ln.17).

With regarding **claim 10**, Sakata discloses the imaging device as claimed in claim 8, wherein the transparent portion comprises a transparent member attached to the case (see entrance windows 4b-4a; Col. 5, Ln. 52-Col. 6, Ln.17).

With regarding **claim 12**, Sakata discloses the imaging device as claimed in claim 8, wherein the case is formed of a transparent material (see entrance windows 4b-4a; Col. 5, Ln. 52-Col. 6, Ln.17) and comprises a light shielding portion in which coated with a light shielding member having light shielding property (see section 4 and 102; Col. 13, Ln. 62-67).

With regarding **claim 13**, Sakata discloses the imaging device as claimed in claim 8, wherein a hard coating processing is performed on at least the transparent portion of the case (see section 4, 102 and entrance windows 4b-4a; Col. 5, Ln. 52-Col. 6, Ln.17; Col. 13, Ln. 62-67).

With regarding **claim 16**, Sakata discloses a vehicle circumference visualizing apparatus comprising:

an imaging device disposed at a front portion or at a rear portion of a vehicle (abstract; Col. 1, Ln. 1-10; Col. 3, Ln. 41-67; Col. 10, Ln. 65-Col. 11, Ln. 34);

an image processing section configured to perform predetermined image processing with respect to an image picked up by the imaging device (Col. 11, Ln. 10-18;); and

a display device arranged within the vehicle and displaying the image processed by the image processing section (Fig. 9; see display 8; Col. 3, Ln. 41-67; Col. 10, Ln. 18-40), wherein the imaging device comprises:

an image pickup element configured to simultaneously pick up images in plural visual field directions (see Figs. 5-6; 13);

an image pickup lens arranged on a front face of the image pickup element (Figs. 5-6; lens 3); and

a first optical element arranged on a front face of the image pickup lens (3) and having a concave lens property (Figs. 5-6; see concave 2c and 1b), wherein the first optical element guides lights from wide angle ranges in partial visual field directions among the plural visual field directions onto the image pickup element via the image pickup lens (Figs. 5-6; Col. 8, Ln. 43-Col. 9, Ln. 53; the concave lens 2c inherently guides lights from a plurality of field of view into image sensor 13).

With regarding **claim 17**, Sakata discloses the vehicle circumference visualizing apparatus as claimed in claim 16, wherein the imaging device further comprises a second optical element arranged on the front face of the image pickup lens (3) and having no concave lens property (Figs. 5-6; see surfaces 2b-2a), and wherein the second optical element guides lights from non-wide angle ranges in the remaining visual field directions among the plural visual field directions onto the image pickup element (13) via the image pickup lens (3) (Col. 8, Ln. 42-50; Col. 9, Ln. 1-20; each of the surface lens 2a or 2b guides lights from either left or right direction).

Allowable Subject Matter

7. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3 the following is a statement of reason for the indication of allowance: the prior art made of record and considered pertinent to the applicant's disclosure does not disclose nor fairly suggest the imaging device of claims 2 and 1 further in combination with: **wherein the first optical element is arranged within lower area of a vertical view angle of the image pickup lens and guides light from the visual field direction of a forward slanting lower direction to the imaging device onto the image pickup element via the image pickup lens, and wherein the second optical element is arranged within upper area of the vertical view angle of the image pickup lens and guides lights from the visual field directions of both left side and right side directions of the imaging device onto the image pickup element via the image pickup lens.**

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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a) Imoto (US-7,359,001) discloses a camera device and vehicle periphery monitoring apparatus.

b) Tomida (US-2001/0,028,393) discloses an apparatus for watching around vehicle.

c) Ohshita (US-5,499,142) discloses a concave lens for providing large aperture wide angel type photographic system.

d) Hanano (US-6,185,045) discloses a concave half mirror for providing an image of wider field angle despite its compact structure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG H. LAM whose telephone number is (571)272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LIN YE can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HL
09/01/08

/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622